REMARKS

In the Office Action, claims 1-26 are rejected under 35 USC §112, second paragraph. Claims 1-4, 6, 7, 16, 17 and 23 were rejected under 35 USC §102(e) anticipated by or, in the alternative, under 35 USC §103(a) as obvious over Zandbergen et al. Claims 5, 11-15 and 26 were rejected under 35 USC §103(a) as being unpatentable over Zandbergen et al. Claims 8-10 were rejected under 35 USC §103(a) as being unpatentable over Zandbergen et al and further in view of Bachmann. Claims 20, 21 and 24 were rejected under 35 USC §103(a) as being unpatentable over Zandbergen et al and further in view of Watkinson and Yamabe et al. Claim 24 was rejected under 35 USC §103(a) as being unpatentable over Zandbergen et al and further in view of Hutchison.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made".

Claim 1 has been amended to highlight some important features of the method of lining a storage tank according to the invention. The method requires the step of providing a pliable glass reinforced material comprising a pliable matrix of a resin, glass reinforcement inert fillers and a photo-initiator sandwiched between a backing film and a facing film. The backing film and facing films minimize emissions and facilitate handling and

shaping. The method involves removing the backing film from the sheet of glass reinforced material, laying up the sheet of glass reinforced material onto the grid, and then removing the facing film. Finally, the matrix of glass reinforced material is exposed to ultra violet rays to cure the material and form a hardened inner liner shell for the tank. Basis for these amendments is provided throughout the specification, for example at page 7, line 12 to page 8, line 6.

The invention provides a method of lining a storage tank which is extremely efficient and effective both in terms of material costs and installation costs.

None of the prior art citations remotely disclose or suggest the invention as defined in claim 1.

Zandbergen et al describes a tank lining comprising a grid formed by double ply fabric which is reinforced by a resin. The grid may be covered by sealing layers 12, 13 of glass fiber reinforced plastic. There is no disclosure or suggestion that the glass fiber reinforced plastic of the sealing layer of Zandbergen et al is a pliable matrix of a resin, glass reinforcement inert fillers and a photo-initiator sandwiched between backing and facing films. Zandbergen et al further do not disclose or suggest an arrangement in which such a GRP sheet material is applied in situ to a pre-applied interstitial grid by removing a backing film,

laying up onto the grid, removing the facing film and then exposing the matrix to UV rays to cure the material.

The Examiner has referred to the use of a UV-curing resin in Zandbergen. This however does not relate to the separate glass reinforced plastic layer but rather to the resin used for impregnating the double pile fabric, see column 3, line 60 of Zandbergen et al.

Based on the foregoing amendments and remarks, it is respectfully submitted that the claims in the present application, as they now stand, patentably distinguish over the references cited and applied by the Examiner and are, therefore, in condition for allowance. A Notice of Allowance is in order, and such favorable action and reconsideration are respectfully requested.

However, if after reviewing the above amendments and remarks, the Examiner has any questions or comments, he is cordially invited to contact the undersigned attorneys.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE ABSTRACT:

Please amend the Abstract of the Disclosure as follows.

An underground storage tank ~~1~~ is lined in situ by first clearing the inner surface of the tank using water jetting. The surface is then inspected and grit blasted. A corrosion barrier coating ~~16~~ in the form of glass flakeepoxy resin is applied to a minimum dry film thickness of 1000 microns. An adhesive is applied to the barrier coating ~~16~~ and sheets of an HDPE interstitial grid ~~10~~ are bonded to the adhesive forming an air gap of about 5 mm. A pliable glass reinforced plastic layer ~~15~~ is laid upon the grid ~~10~~. The GRP material is exposed to UV lamps to form an impermeable shell within the tank. A surface coating layer ~~2~~ may be applied. A leak detector ~~40, 41~~ is installed in the interstitial space defined by the grid ~~10~~.

~~Fig. 6~~

IN THE CLAIMS:

Please cancel claims 24, 25 and 27-33 without prejudice or disclaimer.

Please amend claims 1-23 and 26 as follows:

1. (Amended) A method of lining a storage tank comprising the steps of: -

providing a keying means on ~~the~~ an inner surface of the tank;

applying a corrosion barrier coating to the keying means;

applying an interstitial grid to the ~~tank~~ corrosion barrier coating;

~~laying up a pliable glass reinforced plastics material onto the grid; and~~

providing a pliable glass reinforced material in sheet form, the glass reinforced material comprising a pliable matrix of a resin, glass reinforcement inert fillers and a photo-initiator sandwiched between a backing film and a facing film;

removing the backing film from the sheet of glass reinforced material;

laying up the sheet of glass reinforced material onto the grid;

removing the facing film; and

exposing the matrix of glass reinforced plastics material to ultra violet rays to cure the glass reinforced material and form a hardened inner liner shell for the tank.

2. (Amended) ~~A~~ The method as claimed in claim 1, wherein the interstitial grid is provided by pre-formed sheets of flexible material.

3. (Amended) ~~A~~ The method as claimed in claim 1, wherein the grid is adhesively bonded to the corrosion barrier coating.

4. (Amended) ~~A~~ The method as claimed in claim 1, wherein the grid has a facing material applied to receive the glass reinforced plastics material.

5. (Amended) ~~A~~ The method as claimed in claim 4, wherein the facing is a polyester mat bonded to one side of the grid.

6. (Amended) ~~A~~ The method as claimed in claim 1, wherein at least a portion of the grid is of a plastics material.

7. (Amended) ~~A~~ The method as claimed in claim 1, wherein at least a portion of the grid is of a composite material.

8. (Amended) ~~A~~ The method as claimed in claim 1, wherein at least a portion of the grid is of a mesh material.

9. (Amended) ~~A~~ The method as claimed in claim 8, wherein the mesh is a metal mesh.

10. (Amended) ~~A~~ The method as claimed in claim 9, wherein the mesh is an aluminium mesh.

11. (Amended) ~~A~~ The method as claimed in claim 6, wherein the grid is ~~of~~ high density polyethylene material.

12. (Amended) ~~A~~ The method as claimed in claim 1, wherein, for lining, the tank is divided into a number of zones, which are separately lined.

13. (Amended) ~~A~~ The method as claimed in claim 12, wherein the final zone to be lined is adjacent a manway into the tank.

14. (Amended) ~~A~~ The method as claimed in claim ~~2~~ 1, wherein the sheets of pliable glass reinforced plastics material applied to the grid in ~~section~~ sections, the marginal edges of the sections being butt jointed.

15. (Amended) ~~A~~ The method as claimed in claim 14, wherein the joints between adjacent sheets are covered with a ~~GRP~~ glass reinforced plastics tape.

16. (Amended) ~~A~~ The method as claimed in claim 1, including the step of:

applying a coating to the hardened GRP liner.

17. (Amended) ~~A~~ The method as claimed in claim 1, wherein the keying means is provided by grit blasting the inner surface of the tank.

18. (Amended) ~~A~~ The method as claimed in claim 1, including the step of:

cleaning the inner surface of the tank prior to providing the keying means.

19. (Amended) ~~A~~ The method as claimed in claim 18, wherein the inner surface is cleaned by water jet cleaning.

20. (Amended) ~~A~~ The method as claimed in claim 1, wherein the corrosion barrier is a glassflake epoxy resin.

21. (Amended) ~~A~~ The method as claimed in claim 20, wherein the corrosion barrier layer is applied to a dry film thickness of greater than 1000 microns.

22. (Amended) ~~A~~ The method as claimed in claim 1, including the steps, prior to application of a corrosion layer of:

inspecting the internal wall of the tank; and

repairing any imperfections in the tank wall.

23. (Amended) ~~A~~ The method as claimed in claim 1, wherein the ~~GRP~~ glass reinforced plastics is exposed to UV by directing UV lamps at the ~~GRP~~ glass reinforced plastics layer.

26. (Amended) ~~A~~ The method as claimed in claim 1, wherein the tank is an underground liquid storage tank.